

CLAIMS:

1. A method for preparing a bis(hydroxy-aromatic) compound which comprises the step of: contacting at least one halo-substituted hydroxy-aromatic compound in a solvent mixture comprising water and at least one organic solvent in the presence of at least one base, at least one catalyst comprising palladium and hydrogen gas at a pressure in a range of between atmospheric pressure and 350 kilopascals.

2. The method of claim 1 wherein the halo-substituted hydroxy-aromatic compound is selected from the group consisting of bromo-substituted hydroxy-aromatic compounds, chloro-substituted hydroxy-aromatic compounds and mixtures thereof.

3. The method of claim 1 wherein the halo-substituted hydroxy-aromatic compound is additionally substituted with at least one substituent selected from the group consisting of alkyl, aryl, ether, alkyl ether, aryl ether, alkyl alcohol, carboxylic acid, carboxylic ester, an additional hydroxy substituent, an additional halogen substituent and mixtures thereof.

4. The method of claim 1 wherein the halo-substituted hydroxy-aromatic compound is selected from the group consisting of 4-bromo-1-naphthol, 4-chloro-1-naphthol, 4-bromo-ortho-alkylphenol, 4-chloro-ortho-alkylphenol, 4-bromo-ortho-cresol, 4-chloro-ortho-cresol, 4-bromophenol and 4-chloro-phenol.

5. The method of claim 1 wherein the organic solvent is present in an amount in a range of between greater than 1 wt.% and less than 80 wt.% based on the weight of organic solvent and water.

6. The method of claim 1 wherein the organic solvent is present in an amount in a range of between about 20 wt.% and about 45 wt.% based on the weight of organic solvent and water.

7. The method of claim 1 wherein the organic solvent is substantially soluble in water.

8. The method of claim 1 wherein the organic solvent is selected from the group consisting of alkyl alcohols, alkyl glycols and mixtures thereof.

9. The method of claim 1 wherein the organic solvent is selected from the group consisting of methanol, ethanol, ethylene glycol and mixtures thereof.

10. The method of claim 1 wherein the halo-substituted hydroxy-aromatic compound is present in the solvent mixture at a concentration of between about 5 wt.% and about 50 wt.% based on the weight of the entire reaction mixture

11. The method of claim 1 wherein the base is selected from the group consisting of alkaline earth metal hydroxides, alkali metal hydroxides and mixtures thereof.

12. The method of claim 11 wherein the base is selected from the group consisting of sodium hydroxide and potassium hydroxide.

13. The method of claim 1 wherein the base is present at a level of at least one molar equivalent in relation to moles of the halo-substituted hydroxy-aromatic compound.

14. The method of claim 1 wherein the base is present in stoichiometric excess in relation to moles of the halo-substituted hydroxy-aromatic compound.

15. The method of claim 14 wherein the base is present at a level in a range of between about 1.8 molar equivalents and about 4 molar equivalents in relation to moles of the halo-substituted hydroxy-aromatic compound.

16. The method of claim 1 wherein the catalyst comprises palladium metal and an inert support.

17. The method of claim 1 wherein the catalyst is present at a level in a range of between about 0.05 wt. % and about 4 wt. % based on the weight of the halo-substituted hydroxy-aromatic compound.

18. The method of claim 1 wherein hydrogen gas is at a pressure of less than about 200 kilopascals.

19. The method of claim 1 wherein hydrogen gas is at a pressure of less than about 150 kilopascals.

20. The method of claim 1 wherein hydrogen gas is at a pressure of less than about 110 kilopascals.

21. A method for preparing a bis(hydroxy-aromatic) compound which comprises the step of: contacting at least one halo-substituted hydroxy-aromatic compound selected from the group consisting of 4-bromo-ortho-alkylphenol, 4-chloro-ortho-alkylphenol, 4-bromo-ortho-cresol, 4-chloro-ortho-cresol, 4-bromophenol and 4-chloro-phenol, in a solvent mixture comprising water and 20- 45 wt.% methanol based on the weight of methanol and water, in the presence of potassium hydroxide, at least one catalyst comprising palladium and hydrogen gas at a pressure in a range of between atmospheric pressure and 350 kilopascals.